C-17 ATS

STATEMENT OF WORK

FOR THE

C-17 AIRCREW TRAINING SYSTEM PROGRAM

19 DECEMBER 2002

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STATEMENT OF WORK

1.0 Introduction

This Statement of Work (SOW) defines the tasks to be performed under the C-17 Aircrew Training System (ATS) Program.

1.1 Scope

This program provides a system of academic, aircrew training device (ATD), and flight training including airland, airdrop, air refueling, primary nuclear airlift forces (PNAF), special operations, and other training required to maintain the guaranteed student concept for C-17 pilots and loadmasters. The C-17 ATS will also support engine run training for aircraft maintenance personnel. The C-17 ATS will satisfy the overall characteristics specified in the C-17 ATS System Specification, paragraphs 3.3.1, 3.3.2, and 3.3.3. The C-17 ATS will include the production, test, installation, maintenance, and concurrency updates of C-17 ATDs and other systems/equipment as defined in, and in accordance with the System Specification. It also includes the transition of Boeing logistics support and student training and support from contract F33657-98-D-2030/2, in accordance with the Integrated Master Plan (IMP) and the Integrated Master Schedule (IMS). After transition, Boeing will continue Total System Performance Responsibility (TSPR) for the ATS, as defined in this SOW and the System Specification.

1.2 Program Execution

Management and administration of this effort will be in accordance with the provisions of the Training Systems Acquisition II (TSA II) contract F33657-01-D-2074, the C-17 ATS Program IMP and IMS, this SOW and the C-17 ATS System Specification.

1.3 Program Implementation

Boeing will continue to operate the ATS and activate follow on bases as authorized by the contract.

2.0 Applicable Documents

Boeing will use the compliance and reference documents as invoked in Section 3.0 herein to maintain and manage this contract.

3.0 Requirements

3.1 C-17 ATS Weapon System Trainer (WST)

3.1.1 C-17 Production WST - Boeing shall produce, test, deliver, and install, C-17 WST #14 and #15 with Loadmaster Stations, including all hardware, software and support equipment, in accordance with the C-17 ATS System Specification (SS-0253-C17ATS) which ensures maximum commonality with fielded devices. These training devices will be fully integrated into the existing C-17 ATS and delivered to meet training need dates. Boeing shall perform WST site activation functions necessary to prepare a site to meet the Ready for Training (RFT) date. Boeing shall provide systems engineering and program management in accordance with Boeing processes and procedures. While training devices are in production, Boeing shall update the WST product specification to reflect technology insertion. Boeing shall manage hardware/software obsolescence through implementation of technology upgrades, while maintaining system performance and supportability. The WSTs will include provisions for incorporating Distributed Mission Training (DMT) capability. (DI-SDMP-81493/T)

3.1.1.1 Student Station (Pilot and Copilot) - Boeing shall provide an Air Vehicle System (AVS) that includes a pilot and copilot station that simulates the location, sound and dynamics of C-17 cockpit components. The simulated cockpit will replicate the aircraft in both appearance and function, using a combination of actual and simulated aircraft hardware. The AVS will include an aural simulation of sounds required by the C-17 ATS System Specification.

3.1.1.2 Student Station (Loadmaster) - Boeing shall provide a forward loadmaster station (LS) that simulates the location, sound, and dynamics of the aircraft forward loadmaster station. The remote loadmaster panels and aft cargo compartment will be simulated on visual displays adjacent to the forward loadmaster station. The LS will be capable of operating in integrated mode with the AVS or in independent mode as selected from the Instructor Operator Station (IOS). For integrated operation, the LS will use the local network capabilities provided through Distributed Mission Training. The LS will be able to connect with any AVS, on the site, active on the DMT Federation Manager.

3.1.1.3 Computational System - Boeing shall provide a computational system for operation, support and maintenance of all major systems as defined by the C-17 ATS System Specification.

3.1.1.4 Visual System - Boeing shall provide a visual system meeting the visual environment and other requirements of the C-17 ATS System Specification and Federal Aviation Administration (FAA) AC120-40B.

3.1.1.5 Motion System - Boeing shall supply a six-degree of freedom motion system that accurately simulates C-17 aircraft motion, in accordance with FAA AC 120-40B, and as described in C-17 ATS System Specification.

3.1.1.6 Avionics System - Boeing shall provide avionics systems that replicate the operation, feel, markings, and location of the aircraft cockpit avionics. These avionics will be a combination of actual aircraft hardware and simulated avionics.

3.1.1.7 Instructor Operator Station (IOS) - Boeing shall provide an instructor station in the AVS and LS, as described in the C-17 ATS System Specification

3.1.1.8 WST Systems Engineering and Program Management - Boeing shall provide systems engineering and program management in accordance with Boeing processes and procedures. Boeing shall plan, direct, and control the complete development and integration of all production WSTs. Provisions will be made to incorporate updates into the product baseline definitions. Boeing shall plan for and conduct evaluations of the WST and test its system components in accordance with the C-17 ATS System Specification, FAA AC120-40B, the Acceptance Test Procedure (ATP) and Approval Test Guide (ATG). (DI-IPSC-81441) (DI-NDTI-80603/T)

3.1.2 Initial Spares - Boeing shall be responsible for identification and delivery of initial spares needed to support the implementation and operation of each WST. Boeing shall update the logistics support package to reflect the initial spares.

3.1.3 Site Activation - Boeing shall plan for and conduct site activation activities at each training site. Facility design criteria changes will be submitted in accordance with (IAW) with CDRL A005. Boeing shall provide the components necessary to activate the site and integrate the site into the ATS. Boeing shall provide appropriate representation at the government-sponsored site activation conferences, construction reviews and facility readiness reviews. Boeing shall obtain long distance telephone service and coordinate with the host base. (DI-FACR-81451)

3.1.3.1 Site Activation Relocation Costs-The Contractor shall be responsible for recruiting and training qualified personnel. The Government shall reimburse the Contractor for all actual costs incurred in relocating and moving personnel to their new duty sites in accordance with the Contractor's relocation policy and the Government Joint Travel Regulations

3.1.4 Distributed Mission Training (DMT) - Boeing shall provide WSTs capable of training C-17 formation missions, to include air refueling in a networked environment, as described in the C-17 ATS System Specification. Boeing shall provide a brief/debrief capability for mission training sessions for WSTs #14 and #15 only. One brief/debrief system is required per AVS.

3.1.5 Data - Boeing shall provide WST engineering drawings, technical manuals and other technical data in accordance with CDRL requirements (DI-DRPR-81000A/T) (TM 86-01/T).

3.2 Cargo Compartment Trainer (CCT)

3.2.1 Production Cargo Compartment Trainer (CCT) - Boeing shall produce, test, deliver, and install CCT #2, including support equipment, IAW the C-17 ATS System Specification that ensures maximum commonality with the fielded device. The CCT will be fully integrated into the existing C-17 ATS. Boeing shall perform CCT site activation functions necessary to prepare a site to meet the RFT date. Boeing shall provide systems engineering and program management in accordance with Boeing processes and procedures. While the CCT is in production, Boeing shall update the CCT product specification to reflect technology insertion. Boeing shall manage obsolescence through implementation of technology upgrades, while maintaining system performance and supportability. (DI-SDMP-81493/T)

3.2.1.1 Boeing Furnished Equipment – Boeing shall procure the C-17 weapon system parts necessary to produce, test, deliver, install, and maintain the cargo compartment trainer.

3.2.1.2 Fuselage - Boeing shall provide the CCT fuselage in accordance with the System Specification.

3.2.1.3 System Engineering and Program Management - Boeing shall provide systems engineering and program management in accordance with Boeing processes and procedures. Boeing shall plan, direct, and control the complete development and integration of the CCT. Boeing shall incorporate all updates into the product baseline definitions. Boeing shall plan for and conduct evaluations of the CCT and test its system components in accordance with the Acceptance Test Procedure (ATP) (DI-NDTI-80603/T) (DI-SDMP-81493/T)

3.2.1.4 Training Loads - Boeing shall produce and deliver training loads to be used with the CCT. This equipment will have sufficient detail to support load inspection of net attachments, tiedown restraints, rigging, and overall general condition.

3.2.2 Initial Spares - Boeing shall be responsible for identification and delivery of initial spares needed to support the implementation and operation of CCT #2. Boeing shall update the logistics support package to reflect the initial spares.

3.2.3 Site activation - Boeing shall plan for and conduct site activation activities at the training site. Facility design criteria changes will be submitted IAW with CDRL A005. Boeing shall provide the

components and storage unit (high-line dock) necessary to activate and integrate the CCT into the ATS. Boeing shall provide appropriate representation at the government-sponsored site activation conferences, construction reviews and facility readiness reviews. (DI-FACR-81451)

3.2.4 Data - Boeing shall provide CCT engineering drawings, technical manuals and other technical data in accordance with CDRL requirements (DI-DRPR-81000A/T) (TM 86-01/T).

3.3 CCT #1 Upgrades

3.3.1 Retrofit – Boeing shall be responsible to incorporate changes listed in Attachment 1.

3.3.2 Spares Update - Boeing shall be responsible for identification and delivery of spares needed to support the implementation and operation of CCT #1 after retrofit/upgrade. Boeing shall update the logistics support package to reflect the updated spares and support the implementation and operation of the simulated cargo loads after the cargo load update.

3.3.3 Cargo load update – Boeing shall be responsible for updating the existing training loads to ensure they reflect equipment types currently transported on the C-17 weapon system.

3.3.4 Data - Boeing shall provide CCT engineering drawings, technical manuals and other technical data in accordance with CDRL requirements (DI-DRPR-81000A/T) (TM 86-01/T).

3.4 Reconfigurable Desktop Simulator (RDS)

Boeing shall produce, test, deliver, and install the RDS including all hardware and software in accordance with the C-17 ATS System Specification. Boeing shall identify and define the logistics support package.

3.4.1 Initial spares - Boeing shall be responsible for identification and delivery of initial spares needed to support the implementation and operation of the RDS. Boeing shall update the logistics support package to reflect the initial spares.

3.4.2 Data - Boeing shall provide RDS engineering drawings, technical manuals and other technical data in accordance with CDRL requirements (DI-DRPR-81000A/T) (TM 86-01/T).

3.5 Operations & Maintenance (O&M)

3.5.1 Contractor Logistics Support (CLS) - Boeing shall provide all the logistics support activities (e.g., manpower, spares) necessary to manage, maintain, and support the C-17 ATS (e.g., ATDs, courseware, software, firmware, spares) to ensure the operational performance of the ATS IAW the C-17 ATS System Specification. These activities include, but are not limited to, depot and site inventory management, inventory storage and control, distribution management of supportability assets, logistics analysis and supportability assessment updates, identification and management of supportability issues, acquisition of replenishment or replacement assets and asset repairs, dispositioning and disposal of obsolete and condemned support assets using the Plant Clearance Automated Redistribution Screening System (PCARRS), execution of supportability quality audits, development and management of logistics data as a result of engineering sustainment or part obsolescence replacement, acquisition, validation and management of technical publications, management of ATS libraries and maintenance and testing of ATS training devices and academic delivery media, and supportability quality audits.

3.5.1.1 Logistics Support System (LSS) - Boeing shall provide and maintain an LSS, and shall use this system to store and manage logistics and maintenance information and provide a CLS reporting capability. Boeing shall use the LSS to provide, maintain, and update an automated inventory control system to track the status of the C-17 ATS support assets (spares, support equipment, and test equipment). The automated system will identify the asset item, location (site), condition, repair activity, sources of repair, vendor or manufacturer, cost data, and lead time for repair and replenishment re-supply. Boeing shall use the LSS to manage and maintain a technical publications tracking capability and to manage

logistics data and maintenance information. As a part of the LSS, Boeing shall provide an automated maintenance data collection system capability to track all maintenance actions, spares/repair parts and labor consumption for the C-17 ATS hardware components by site. Automated maintenance data collection system records will be periodically updated and maintained in electronic media for a period of at least three years and then archived. Data will be accessible to the government upon request.

3.5.1.2 Logistics Support Center (LSC) – Boeing shall establish, maintain and operate an LSC responsible for the planning, execution and management of the CLS activities. The depot portion of the LSC will be located in the Training System Support Center (TSSC), co-located with the formal school, and will be responsible for the coordination and execution of CLS activities at the Formal School and the other C-17 ATS training sites. The TSSC LSC will provide maintenance and management of a logistics support system and the Logistics Support Package (LSP). The training site LSCs will be responsible for all training site CLS activities and for providing training site inputs to the Logistics Support System. The TSSC LSC will provide, manage, maintain and update a technical publications/engineering data program. The purpose of the program will be to identify, develop, generate and acquire C-17 ATS technical data package (TDP) elements necessary to perform CLS activities executed by the training site LSCs. The TSSC LSC will use the Logistics Support System to generate and maintain a technical publications numbering system for the TDP elements of the LSP. The TSSC LSC will be responsible for updating existing technical manuals in accordance with CDRL A012. The TSSC LSC will provide, manage, maintain, and update calibration requirements for ATS support and test equipment. The training site LSCs will ensure that operational support equipment is maintained in accordance with the support and test equipment calibration requirements. (TM 86-01/T)

3.5.1.3 Logistics Support Package (LSP) – Boeing shall manage and maintain the existing C-17 ATS LSP to include initial and replenishment spares, support/test equipment and technical data, courseware and provide updates to the LSP as required due to on-going sustainment operations and the incorporation of new training devices into the ATS. Boeing shall ensure that the LSP supports achievement of the ATS and trainer availability, life cycle support and student throughput requirements as defined in the C-17 ATS System Specification. Boeing shall manage and maintain the LSP in a serviceable and concurrent condition and at specific quantity levels as determined by the Logistics Support Analysis results. Boeing shall be responsible for the replenishment acquisition and repair of LSP items.

3.5.1.3.1 LSP Avionics - The Air Force will be responsible for replacement/repair of the following aircraft avionics: Core Integrated Processor (Mission Computer), Mission Computer Keyboard, Mission Computer Display, Multi Function Control, Multi Function Display, Heads Up Display, Com/Nav Control, Standby Engine Display, Warning Annunciator Panel, Bearing Distance Heading Indicator, Thrust Control Module and the Video Integrated Processor.

3.5.1.4 Libraries – Boeing shall manage and maintain a data library at the TSSC and at the training sites to support the ATS. The TSSC will maintain a master and a working copy of library items. The TSSC library will contain a complete set of C-17 ATS engineering drawings, including subcontractor and vendor drawings, and the associated lists that define the complete hardware baseline, technical publications, and all C-17 ATS specifications (hardware, software and courseware) that identify and document the master product baseline. The training site libraries will have access to technical publications, specifications, engineering drawings, subcontractor and vendor drawings and associated lists necessary to operate and maintain the training site. Boeing shall provide government-designated personnel access to the libraries. Boeing shall plan for and support annual government reviews of the library to ascertain the data quality, currency, and completeness. As a part of the LSS, Boeing shall provide an automated library item tracking and management system and use this system to manage and control library items.

3.5.1.5 Site Maintenance – Boeing shall provide, maintain and operate a maintenance program that will ensure all scheduled and unscheduled maintenance is performed at each training site. Boeing shall

provide and manage the labor and material necessary to support the site, ATS program activities, and facility management. Boeing shall provide janitorial services for contractor occupied buildings at the Altus and Jackson sites. Site maintenance shall support the achievement of the contract defined training device availability and student throughput requirements. Boeing shall provide the necessary maintenance capability to support the training surge requirements as defined in the contract. At Altus, Boeing shall control, maintain, and operate a fleet of general and special purpose vehicles; and perform cargo handling and maintain cargo rigging to support loadmaster training on the CCT.

3.5.1.5.1 Special Operations avionics Support - Boeing shall support periodic installation and removal of special operations avionics equipment in the WSTs as required by the Air Force.

3.6 Training System Support

3.6.1 Program Management - Boeing program management shall be responsible for the overall planning, directing, system engineering and controlling of the C-17 ATS. Boeing shall develop and maintain the Integrated Master Plan (IMP) and develop, maintain and deliver an Integrated Master Schedule (IMS) IAW CDRL A009. Boeing shall maintain and provide the cost/schedule variance report in accordance with CDRL A008. They will provide for the capability of a daily interface with all aspects of the Training System Product Group (TSPG) C-17 ATS Program office as an IPT. Boeing shall provide for USAF real-time electronic access to key program data through a web-based system and provide visibility into program metrics, schedules, technical and test performance, cost performance and program risk. Boeing shall submit Specification Change Notices for changes to the System Specification in accordance with CDRL A003. Boeing shall comply with the requirements of the National Industrial Security Program Operating Manual (NISPOM) and the Boeing Security Manual, and insure necessary personnel maintain the proper security clearances. Boeing shall provide for and support semi-annual System Review Boards (SRB), semi-annual training meetings, and executive/business meetings as required. Boeing shall submit meeting minutes in accordance with CDRL A015. (DI-ADMN-81250A) (DI-MGMT-81467) (DI-CMAN-80643C) (DI-MISC-81183A)

3.6.1.1 Data Management – Boeing shall develop, manage, and deliver to the Air Force required data items listed and scheduled on the CDRL utilizing the Boeing ISO-certified data management processes in accordance with our Data Management Plan (TSSP-K3.004). Boeing shall use the instructions for preparation of each required data item given in data item descriptions (DD Form 1664) identified in the CDRL and as modified in Block 16 of DD Form 1423. Boeing shall allow the government access to all internal data generated in support of contractual tasks. Boeing shall provide copies of this data to the government upon request in accordance with CDRL A007. Boeing shall maintain a current index listing which identifies all such available data. Boeing shall honor only those requests for accession list data signed by Contracting Officer. (DI-CMAN-80643B) (DI-MGMT-81453)

3.6.1.1.1 Conference Minutes - Contractor shall provide conference minutes for the meetings identified in Block 16 D1-ADMIN-81250A.

3.6.1.2 Program Metrics - Boeing shall provide the following program metrics monthly:

Maintenance Availability – Maintenance availability objective of 0.95 when operated as defined in the System Specification.

Additional program metrics shall be provided as mutually agreed between the Air Force and Boeing.

3.6.2 Training System Support Center (TSSC) Management and Administration - Boeing shall operate, manage, plan and schedule activities, and maintain the TSSC to provide life cycle hardware, software, and courseware support for the C-17 ATS. The contractor managed TSSC will provide training of Boeing personnel to support the C-17 ATS. The TSSC will provide sustaining support for routine changes to hardware, software, and courseware resulting from changes to C-17 flight manuals and Air

Force publications applicable to the C-17 ATS. Changes resulting from aircraft changes will be incorporated via separate proposals.

Boeing shall use the TSSC as the master repository for all O&M data developed and/or used by the ATS. O&M data is all data used to support the day-to-day operation of the ATS. Boeing shall be responsible for data currency and the distribution of changes to the sites. Boeing shall support and schedule the monthly Operations Integrated Product Team (IPT) meeting. The TSSC will provide support to the C-17 ATS to include configuration/concurrency management, software/hardware/ courseware updates, depot support functions, logistics support (including analysis), publications update and library storage, information systems, and training management system (TMS) support. (DI-MGMT-81453/T)

3.6.3 TSSC Engineering and Management - Boeing shall maintain and manage a TSSC Engineering management system of integrated elements that transform operational needs into a description of system performance parameters and configurations. The system will integrate related technical parameters and ensure compatibility of all physical, functional and program interfaces to optimize total system definition and design. Reliability, maintainability, safety, survivability, human engineering and other such factors will be integrated into the total engineering effort to meet cost, training schedule, supportability and technical performance objectives.

3.6.3.1 Design and Development – The Boeing TSSC engineering shall design, develop, test, prototype and install hardware, software modifications as a result of ATS training device life cycle performance improvements, training feature enhancements, mission rehearsal capability and system safety modifications. Boeing shall conduct feasibility and trade studies in conjunction with engineering and logistics analysis for product baseline updates. Boeing shall design and develop workaround solutions, if needed, to support student training until permanent solutions are implemented. TSSC Engineering shall design and develop modification kits for field installations that apply to system components.

3.6.3.2 Sustainment - The Boeing TSSC Engineering shall provide the required engineering resources to maintain, develop, modify, and test changes to ATS component hardware, software and firmware to sustain the ATS product baseline. Sustainment will include analysis activities, facility engineering, safety engineering, system administration and management of training devices and engineering support equipment, Engineering Baseline Administration and Management, Technical Engineering Data Administration and Management, ATD Security Activities, Mission Rehearsal Team Activity, Test Support, Production Engineering Support, ATS Technical Information Clearinghouse Activities, and Quality Issue resolution activities.

3.6.4 Training Management System (TMS) - Boeing shall provide, operate, maintain, and update an automated web-based TMS in accordance with the C-17 ATS System Specification to support the C-17 ATS at the required student throughput rate. The TMS will perform the administrative, management, trend analysis, reporting, and evaluative functions required for training management. Boeing shall provide personnel, hardware and software necessary to support the TMS at Boeing operated sites. Boeing shall manage the C-17 ATS TMS from the Training System Support Center (TSSC).

3.6.5 Information System Support - Boeing shall maintain and manage an information system services capability that is responsible for the development, acquisition, implementation, and maintenance of the C-17 ATS Information System. These capabilities will include information system component and infrastructure management and security; and, software application, computer hardware and database development, maintenance and support.

The Information Systems function will also provide Boeing C-17 ATS internal and Air Force C-17 ATS customer help desk support; hardware and software asset management; telecommunications system support, system upgrades and installation, maintenance and management. Information System services

will support ATS change management activities; provide catastrophic recovery services; create, maintain, and manage information system report generation facilities; disposition of obsolete information and data, and support web-site maintenance and administration.

3.6.5.1 Database Support - Boeing shall maintain and update electronic database systems to provide for data collection, analysis, and reporting in order to reduce the amount of paper-based and desktop data collection processes used in Training Operations, Logistics, Engineering, Courseware, Configuration Management, and Product Assurance.

3.6.6 Courseware – Boeing shall maintain training courses, as required by the C-17 ATS System Specification. Boeing shall analyze, design, update, validate, evaluate, and provide configuration management for all training necessary to meet student training requirements. Boeing shall maintain the training task baseline for each course. Boeing shall perform, as a part of normal TSSC operations, courseware changes resulting from student comments, results of surveys and changes to technical orders, safety supplements, training change proposals (TCPs), and Air Force publications applicable to the C-17 ATS that are required for curriculum currency. Changes will be incorporated according to the priority established by the Boeing/USAF Courseware team. For interim changes (emergency, operational, safety supplement, and interim messages), Boeing shall update courseware and/or issue a training information file (TIF) within two days of the receipt of the change at the TSSC. Courseware changes resulting from aircraft changes will be incorporated via separate proposals. As a result of courseware changes, the Master Task Listing/ Evaluation Standards Document (MTL/ESD) and syllabus will be updated. (DI-ILSS-80568/T) (DI-MISC-81459/T)

3.6.7 Configuration Management (CM) - Boeing shall manage and maintain a configuration management system as identified in the C-17 ATS Configuration Management Plan (MDTS-C17-800103) and in accordance with the Boeing ISO-certified processes. The configuration management system provides the capability to manage, track and control ATS change activities, release formal baseline changes, provide traceability to training and design requirements, configuration of all fielded assets, facilitate aircraft/mission/objective change impact analysis, and produce status accounting reports for the C-17 ATS. During production of new training devices, the configuration functions reside within the C-17 ATS System Engineering Integration Team (SEIT). After production, the responsibility for maintaining C-17 ATS Configuration transfers to the TSSC.

3.6.8 Product Assurance - Boeing shall manage and maintain a product assurance program in accordance with the Boeing ISO-compliant processes and procedures that ensures compliance with the C-17 ATS design specifications and training standards. Boeing shall utilize measurable indicators for product assurance. The Product assurance program functional elements consist of product assurance, system safety, quality assurance (QA), and test and evaluation (T&E) as delineated in the C-17 ATS Quality Support Plan (MDTS-C17-80002).

3.6.8.1 Aircrew Training Device Test and Evaluation - Boeing shall plan for and conduct all evaluations of the training system, and test its system components to verify compliance with the system specification. Boeing shall track discrepancies identified during testing and resolution. (DI-NDTI-80603/T)

3.6.8.2 Other Training Media Test and Evaluation - In addition to ATDs, Boeing shall plan and conduct appropriate evaluation of any C-17 ATS training media hardware and software.

3.6.8.3 Support System Test and Evaluation - Boeing shall plan for and conduct appropriate evaluations of ATS support systems and subsystems to verify compliance with the system specification and SOW. Boeing shall make provisions for AF monitoring of acceptance testing of support systems.

3.6.8.4 Operational Evaluation - Boeing shall plan and conduct an Operational Evaluation for the C-17 ATS. This evaluation will continue throughout the life of the contract and will consist of; assessment of student learning to meet established objectives, measurement of student learning rates,

internal and external feedback across the entire training spectrum, identification and resolution of discrepancies and deficiencies, ability to meet operational requirements, and training system currency with the weapon system.

3.6.8.5 Verification - Boeing shall plan for and conduct the verification activities indicated in Table III of the System Specification.

3.7 Student Training and Management

Boeing shall plan, manage, and conduct operations including student training and management required to produce guaranteed qualified crewmembers and maintenance engine run technicians at each training site in accordance with the System Specification and Boeing processes and procedures. Boeing shall utilize measurable indicators to monitor and verify the effectiveness of student training and management. Boeing shall provide for and support a semi-annual Training Meeting.

3.7.1 Operations and Training Management - Boeing shall be responsible for the administration, management, and daily operation of all C-17 ATS delivered training. Boeing shall develop and integrate yearly class schedules into the Programmed Flying Training (PFT) document using the throughput tables. Boeing shall provide and manage all the personnel required for the successful operation and support of the C-17 ATS. Boeing personnel shall be qualified and knowledgeable in their assigned area(s). The instructors will be capable of teaching pilots, loadmasters, and maintenance engine run technicians to a government acceptable skill level and specified throughput. Boeing shall manage and maintain Community College of the Air Force (CCAF) compliance records and support Government audits to ensure that all instructors teaching CCAF accredited courses meet the minimum CCAF requirements (as outlined in AFI 36-2304) for instructors. Boeing shall complete an AETC Electronic Feedback Instrument on each T-1A Undergraduate Pilot Training (UPT) and Basic Loadmaster (BLM) graduate attending initial qualification training. Post-graduate evaluations, for all C-17 Schoolhouse courses, shall be collected using e-mail notification of the student and student's supervisor and using forms accessible through the Internet (AETCI 36-2206).

3.7.1.1 O&M Training Management Relocation Cost-The Contractor shall be responsible for recruiting and training qualified personnel. The Government shall reimburse the Contractor for all actual costs incurred in relocating and moving personnel to their new duty sites in accordance with the Contractor’s relocation policy and the Government Joint Travel Regulations

3.7.2 Site Management/Administration/Scheduling - Boeing shall provide, train, maintain, and manage a staff at each site to perform the daily operation of the site. The Boeing site manager shall be responsible for the daily administration, scheduling, and operation of site activities, to include the interface with the host base for the day-to-day operation of the facilities.

3.7.2.1 Instruction - Boeing shall provide and train formerly qualified aircrew members to teach pilots, loadmasters, and maintenance engine run courses depending on their specialty, act as Subject Matter Experts, support testing, and conduct activities supporting training delivery to meet contracted student throughput requirements.

3.7.2.2 Mission Rehearsal - Boeing shall maintain a mission rehearsal capability and support mission rehearsals as required with AMC. Databases for mission rehearsal shall cover a 1 × 1 geo-cell around an AMC identified airfield with 5-meter resolution.

3.7.2.3 RDS Databases - Boeing shall maintain a RDS database support capability to generate 3 RDS databases per year. These databases shall cover a 25 NM radius around an AMC identified airfield with 5-meter resolution.

3.8 Transition to Successor

Boeing shall support the Government during the selection and transition to a new contractor at the conclusion of this contract. Boeing shall:

- Provide a data package to support the re-competition for a follow-on contractor
- Provide access for Government-sponsored Industry Days and site visits during the re-competition
- Participate in the Transition IPT as required by the co-IPT leads (the Government and new contractor)
- Develop a transition plan to a follow-on contractor that provides a smooth transition for student training and management required for producing "guaranteed qualified crewmembers". This transition will be transparent to the students and be conducted in such a manner that continuity of training, training management, and support will be maintained.
- Assist the Air Force in performing an inventory of all C-17 ATS assets at contract transition.
- Assist the Air Force in performing an audit at contract transition to ascertain that a complete set of documentation exists, in suitable condition, with the latest revisions incorporated.
- Provide support to the incoming contractor, on a non-interference basis, during a 30-day transition period prior to the conclusion of the current contract. The new contractor, with support of Boeing as an IPT member, will develop the transition schedule.
- Provide maintenance database information to the new contractor in a form that will allow viewing and manipulation in a Windows 2000 (or better), COTS Relational Database package. The exact format can be agreed to in the IPT.
- Deliver to the new contractor all program spares.
- Account for all parts in the repair cycle and arrange with the new contractor to return these items to the new contractor's control. Boeing responsibility under the old contract will end when the last part sent for repair under the old contract is returned in serviceable condition.
- Reconcile all inventory items with the new contractor.
- Transfer responsibilities for all facilities to the new contractor
- Coordinate with the Program Officer/Quality Assurance Representative (PO/QAR) at each site and the incoming contractor to transfer non-RSP items such as GFP desks, file cabinets, chairs, and shelving either to the new contractor or back to government control.
- Remove all Boeing equipment and Boeing owned materials.

3.9 Change Management

Boeing shall maintain a change management process that includes training system enhancements and concurrency with the C-17 aircraft. Boeing shall use the change management (PE/PI) process to maintain training system concurrency with the C-17 aircraft. Boeing shall track the status of the C-17 aircraft modifications/changes and analyze the changes for impacts to the C-17 ATS program. Boeing shall develop and submit change requests required to maintain system concurrency or for training system enhancements. Boeing shall incorporate concurrency modifications into the training system prior to aircraft delivery. Boeing shall provide the government insight into the status of all ongoing modification efforts, from identification to final completion. Boeing shall incorporate concurrency block updates into all production WSTs, manage updates in accordance with the aircraft program PE/PI process, and ensure the training system is current with the aircraft at each training site. Approved training device modifications will provide maximum flexibility to allow for expandability and technology improvements

thus minimizing the impact of future modifications. Boeing shall submit Contract Change Proposals (CCPs) to propose changes to contract requirements other than those contained in specifications and drawings in accordance with A001. Boeing shall submit Engineering Change Proposals for those changes that impact the system specification in accordance with CDRL A002. Electronic cost sheets will also be provided. (DI-ADMIN-81401A/T) (DI-CMAN-80639C/T)

3.10 Program Enhancements

3.10.1 Web-based TMS

Boeing shall develop and provide a Training Management System (TMS) availability as a web-based application providing the TMS Gradesheet program functionality as identified in Enclosure 2 herein.

3.10.2 Program Web

Boeing shall develop and maintain a password controlled C-17 ATS Internet web site to include data accessible to Government personnel, site personnel and associate contractors. Boeing generated data included on the web site will be in the most current Microsoft compatible file format or other format as directed by the associated CDRL. Boeing shall notify designated personnel by electronic mail of updates posted on the web.

4.0 Glossary

a. Courseware - Instructional materials required to support training across all media including academic media and the aircraft. Courseware may reside in a variety of media that may include CD-ROM video/audio cassette, floppy diskette, videodisc, and course documents/material.

b. End Item - The final production product when assembled or completed and ready for delivery/deployment.

c. Guaranteed Student Performance - Performance such that the graduate can pass a prescribed USAF evaluation.

d. Initial Spare - a sub-assembly or component, identified by Boeing Logistics as critical to maintaining an Aircrew training media, delivered with the training device at the Ready for Training date to provides an immediate spare availability.

e. Logistics Support Package - a composite list of all available spares, consumables and support equipment for the C-17 ATS that is maintained electronically in a retrievable database by the TSSC.

f. Simulator Certification - A program for evaluating and certifying ATD simulation and performance fidelity of AF training devices.

g. Turnover Rate - Normally expressed in years; loss rate for the entire crew force or part of a force (aircrew or maintenance). For example, a turnover rate of three years means that it takes three years to lose the entire force or there is a loss rate of 33% each year.

5.0 Acronyms

AETC	Air Education and Training Command
ATD	Aircrew Training Device
ATG	Approval Test Guide
ATP	Acceptance Test Procedure
ATS	Aircrew Training System
AVS	Air Vehicle System
BLM	Basic Loadmaster
CCAF	Community College of the Air Force
CCP	Contract Change Proposal

CCT	Cargo Compartment Trainer
CLS	Contractor Logistics Support
CM	Configuration Management
COTS	Commercial off the Shelf
DMT	Distributed Mission Training
ECP	Engineering Change Proposal
FAA	Federal Aviation Administration
IAW	In Accordance With
IMP	Integrated Master Plan
IMS	Integrated Master Schedule
IOS	Instructor Operator Station
IPT	Integrated product Team
LS	Loadmaster Station
LSC	Logistics Support Center
LSP	Logistic Support Package
LSS	Logistics Support System
MTL/ESD	Master Task Listing/Evaluation Standards Document
NISPOM	National Industrial Security Program Operating Manual
O&M	Operations and Maintenance
PCARSS	Plant Clearance Automated Redistribution Screening System
PE/PI	Program Enhancements/Product Improvements
PFT	Programmed Flying Training
PNAF	Primary Nuclear Airlift Forces
PO/QAR	Program Officer/Quality Assurance Representative
QA	Quality Assurance
RDS	Reconfigurable Desktop Simulator
RFT	Ready for Training
SEIT	System Engineering Integration Team
SOW	Statement of Work
SRB	System Review Board
T&E	Test and Evaluation
TCP	Training Change Proposal
TDP	Technical Data Package
TIF	Training Information File
TMS	Training Management System
TSA II	Training Systems Acquisition II
TSPG	Training System Product Group
TSPR	Total System Performance Responsibility
TSSC	Training System Support Center
UPT	Undergraduate Pilot Training
WST	Weapon System Trainer

1 CCT-1 RETROFIT

Boeing shall upgrade CCT-1's baseline by retrofitting four of the twenty-nine improvements (see individual descriptions below) of the CCT-2 baseline improvements. These retrofits are critical to ensuring that CCT-1 and CCT-2 support a common training baseline.

1.1 Improve Troop Door Design

Boeing shall retrofit the design of the troop door for CCT-2 to improve reliability and maintainability into CCT-1. See PIDS-0255-C17ATS, Attachment 10 for a description of the new fidelity levels following retrofit.

1.2 Cargo Door/Ramp/Toe Manual Operation

Boeing shall retrofit CCT-1 with the design changes incorporated into CCT-2 that support manual operations of the cargo door, cargo ramp, and ramp toes. See PIDS-0255-C17ATS, Attachment 11 for a description of the new fidelity levels following retrofit.

1.3 Cargo Ramp Safety Mat Design

Boeing shall retrofit CCT-1 with the CCT-2 Cargo Ramp Safety Mat for improved reliability and maintainability in inclement conditions.

1.4 Troop Door Ladder Design

Boeing shall retrofit CCT-1 with the improved maintainability CCT-2 Troop Door Escape Ladder and the Right Forward Escape Hatch ladder designs.

2 Retrofit Schedule

Boeing shall retrofit the aforementioned items into CCT-1 within twelve months following delivery and acceptance of CCT-2.

WEB-BASED TRAINING MANAGEMENT SYSTEM (TMS)

Boeing shall provide the existing Gradesheet TMS program functionality using current Internet browser technology or as a web-enabled windows application.

1.0 Design Approach

The basic approach will provide a web server that is accessible from outside the Boeing firewall and that has access to the current TMS database. This database will be maintained current with updates done through the normal ATS operations and will forward updates made from the web to the main TMS database. The goal shall be to use the TMS web portion for normal ATS production to eliminate the requirement to support two versions of comparable functionality.

2.0 Referenced Documents

The existing TMS Specification shall be the controlling document for the TMS web-based functionalities provided unless otherwise specified herein.

MDTS Document #S5031, Training Management System Prime Item Product Fabrication Specification

3.0 Requirements

3.1 Capabilities

The following existing TMS Gradesheet program functionality shall be supported via the web-based TMS application:

- Display and update of existing biographical information
- Initiating a new course for a student (registration)
- Entering and updating individual lesson and objective grades and comments
- Remediation assignment
- Certify lesson completion for a student
- Review of all TMS training records including course, lesson, and objective grades
- Recording of the TMS training records review
- Display of selected student/course performance similar to the Training Performance report
- Display of an individual person schedule for a defined time period
- Display of an individual resource schedule for a defined time period
- Completing activities in the schedule upon completion of a training activity

3.2 Security

Security will be consistent with standard commercial web applications that contain/use personal information. All display of personal information combining a person's name, ID, phone number, or address will be through a secure connection. User validation shall be performed requiring entry of the user's ID and password through a secure page. User functionality will be based on the person's group similar to the current TMS.

3.3 Availability

Availability of the TMS web application shall be 24 hours per day/7 days a week (24/7). Pre-announced down times for updates and maintenance will be required. Availability is independent of specific user availability as user service provider and connection path are beyond contractor control.

3.4 Performance

The performance of the web-based TMS shall be consistent with the performance of a comparable commercial web-based data exchange site over a 56K dial-up line.

4.0 Quality Conformance

The web-based TMS Gradesheet program functionality shall be verified utilizing the existing TMS acceptance test procedures modified as necessary to reflect the implementation proposed above.

5.0 Schedule

The web-based TMS Gradesheet program functionality shall be implemented over a 12-month period commencing with contract award.